

- (c) the first face of each stopping means is concave;
 - (d) each stopping means is attached to an inside face of the mounting bracket, and further wherein the first face of each stopping means is ~~angles~~ angled outward towards the inside face of the mounting bracket to which each stopping means is attached so that the end of each side arm can contact a stopping means and the inside face of the mounting bracket simultaneously
 - (e) the fourth pivot point is disposed beneath the first pivot point, and the third pivot point is disposed beneath the second pivot point; and
 - (f) the articulating arm mechanism may be rotated relative to the desk by means of a swivel mechanism attached to the mounting bracket in combination with a mounting track to which the mounting bracket is slidably connected, either directly or indirectly.
54. An articulating arm mechanism for connecting a shelf to a desk comprising:
- (a) a mounting bracket, the mounting bracket having a front end and a back end, the front end being closer to the front of the desk than the back end;
 - (b) an upper arm pivotally connected to the mounting bracket at a first pivot point, the rear of the upper arm being defined as the end of the upper arm closest to the mounting bracket;
 - (c) a shelf bracket pivotally connected to the upper arm at a second pivot point; the front of the upper arm being defined as the end of the upper arm closest to the shelf bracket;
 - (d) a side arm pivotally connected to the shelf bracket at a third pivot point; the side arm being further attached to the mounting bracket at a fourth pivot point; the side arm having within it a first opening such that the side

arm can be pivoted relative to the mounting bracket about the fourth pivot point and can be reciprocatingly moved relative to the fourth pivot point; the front of the side arm being defined as the end closest to the third pivot point, and the rear of the side arm being defined as the end opposite from the front;

- (e) a stopping means, the stopping means having a first side facing towards the rear of the side arm, such that when the side arm moves horizontally relative to the fourth pivot point, the rear of the side arm can contact the first side of the stopping means;

wherein the side arm and the upper arm are ~~substantially~~ not parallel to each other; and further wherein the position of the stopping means are such that regardless of the angle of the side arm to the horizon-ground, the angle of the shelf bracket relative to horizontal remains constant.

55. An improved auxiliary shelf mechanism including an auxiliary shelf having a top surface and a bottom surface, and a linkage to attached the auxiliary shelf to a desk so that the auxiliary shelf may be moved horizontally and/or vertically relative to the desk, wherein the improvement comprises attaching the linkage to the auxiliary shelf at a substantially interior point so that no part of the auxiliary shelf mechanism extends of said auxiliary shelf in a manner effective to prevent the auxiliary shelf mechanism from extending below the bottom surface of the auxiliary shelf.

57. An improved auxiliary shelf mechanism including an auxiliary shelf having a top surface and a bottom surface, and a linkage to attached the auxiliary shelf to a desk so that the auxiliary shelf may be moved horizontally and/or vertically relative to the desk, wherein the improvement comprises attaching the linkage to the auxiliary shelf so that no part of the auxiliary shelf

mechanism extends below the bottom surface of the auxiliary shelf~~The auxiliary shelf~~

~~mechanism of claim 55~~, wherein the linkage is a non-parallelogram linkage.

61. A ~~mounting~~ mechanism for mounting a support for an art device on a base, comprising:

- (a) ~~(1)~~ a mounting member for attachment to said base;
- (b) ~~(2)~~ a linkage having a first end for mounting said support and a second end pivotally connected to said mounting member for permitting vertical movement of said support relative to said mounting member between lower and upper positions, said linkage including:
 - (i) an upper link;
 - (ii) a lower link;
 - (iii) a first end link attached to said support;
 - (iv) a second end link for attachment to said base;
 - (v) a plurality of pin joints; and
 - (vi) a crank and slider type joint;

wherein one of said upper and lower links is coupled to said first and second end links by pin joints at each end and the other of said upper and lower links is coupled to said first and second end links at one end by a pin joint and at the other end by said crank and slider joint; and

- (c) ~~(3)~~ a stopping means for releasably restraining said support in a desired position intermediate to said lower and upper positions comprising:
 - (i) an extension of said link having a crank and slider joint having a first engagement surface; and
 - (iii) a second engagement surface affixed to either said base or support.

66. A mechanism according to claim 64, wherein the force of gravity tends to swing said linkage downwardly about the pin joint coupling said ~~upper~~ ~~pper~~ link to said second end link to force said first engagement surface into engagement with said second engagement surface.

68. A ~~mounting~~ mechanism for mounting a support for an art device on a base, comprising:

- (a) ~~(1)~~ a mounting member for attachment to said base;
- (b) ~~(2)~~ a linkage having a first end for mounting said support and a second end pivotally connected to said mounting member for permitting vertical swinging movement of said support relative to said mounting member between lower and upper positions,
 - (i) ~~(a)~~ said linkage including an a upper link, a lower link, a first end link, and first, second, and third pivot connections having parallel axes, wherein
 - (1) ~~(i)~~ said upper link has opposite ends pivotally coupled to said first end link and said mounting member by said first and second pivot connections;
 - (2) ~~(ii)~~ one end of said lower link is pivotally coupled to said first end link by said third pivot connections, and
 - (3) ~~(iii)~~ said second end of said linkage is pivotally connected to said mounting member solely by said second pivot connection;
 - (ii) at least one second link member selected from the group consisting of a second upper link and a second lower link, said second link member being disposed away from the periphery of said support, and

- (c) ~~(3)~~ a stopping means for releasably restraining said support in a desired position intermediate said lower and upper positions,
- (i) ~~(a)~~ said stopping means including a first engagement surface on said linkage and a second engagement surface of said mounting member, said first engagement surface being normally gravitationally biased into engagement with said second engagement surface for releasably restraining said support against downwardly directed vertical swinging movement, and
- (ii) ~~(b)~~ said first engagement surface is released from engagement with said second engagement surface by applying an upwardly directed manual force to said support.

69. (Amended) An improved auxiliary shelf mechanism for positioning an auxiliary shelf, including a means for attaching the auxiliary shelf to a desk so that the auxiliary shelf may be movably positioned relative to the desk, wherein the improvement comprises:

an articulating arm mechanism comprising:

- a) a mounting bracket, the mounting bracket having a front end and a back end;
- b) a first arm having a rear portion and a front portion, the rear portion of the first arm being pivotally connected to the mounting bracket;
- c) a shelf bracket connected to the front portion of the first arm;
- d) a second arm having a front portion and a rear portion, the front portion of the second arm is being pivotally connected to the shelf bracket and the rear portion of the second arm being connected to the mounting bracket; and

e) a stopping surface associated with the mounting bracket such that movement of the second arm is restricted when the second arm is translated;

wherein the first and second arms are not parallel to each other.

77. The auxiliary shelf mechanism of claim 69, further comprising a spring for biasing either the first or second arm arms.

78. (Amended) An improved auxiliary shelf mechanism for positioning an auxiliary shelf, including a means for attaching the auxiliary shelf to a desk so that the auxiliary shelf may be movably positioned relative to the desk, wherein the improvement comprises:

an articulating arm mechanism comprising:

- (a) a mounting bracket, the mounting bracket having a front end and a back end;
- (b) a first arm having a rear portion and a front portion, the rear portion of the first arm being pivotally connected to the mounting bracket;
- (c) a shelf bracket having a shelving surface for supporting an auxiliary shelf thereon, the shelf bracket being away from the outer side edges of said shelving surface and being pivotally connected to the front portion of the first arm by at least one pivot positioned above the shelving surface;
- (d) a second arm having a front portion and a rear portion, the front portion of the second arm being pivotally connected to the shelf bracket and the rear portion of the second arm being connected to the mounting bracket; and

(e) a stopping surface being associated with the mounting bracket such that movement of the second arm is restricted when the second arm is translated.

79. The auxiliary shelf mechanism of claim 78, wherein the first arm is being connected to the mounting bracket by a first pivot and to the shelf bracket by a second pivot and further

wherein the second arm is connected to the shelf bracket by a third pivot and to the mounting bracket by a sliding joint.

93. An improved auxiliary shelf mechanism for positioning an auxiliary shelf, including a means for attaching the auxiliary shelf to a desk so that the auxiliary shelf may be movably positioned relative to the desk, wherein the improvement comprises:

an articulating arm mechanism comprising:

- (a) a mounting bracket, the mounting bracket having a front end and a back end;
 - (b) a first arm having a rear portion and a front portion, the rear portion of the first arm being pivotally connected to the mounting bracket;
 - (c) a shelf bracket having a shelving surface for positioning a keyboard on top thereof, the shelf bracket being pivotally connected to the front portion of the first arm by at least one pivot positioned above the shelving surface;
 - (d) a second arm having a front portion and a rear portion, the front portion of the second arm being pivotally connected to the shelf bracket and the rear portion of the second arm being connected to the mounting bracket;
 - (e) a stopping surface associated with the mounting bracket such that movement of the second arm is restricted by the stopping surface when the second arm is translated;
 - (f) said means for attaching the auxiliary shelf to a desk comprises a mounting track; a swivel mechanism associated with the mounting bracket for rotating the articulating arm mechanism relative to the desk; the swivel mechanism positioned in combination with the mounting track to which the mounting bracket is slidably connected; and
 - (g) a spring for biasing either the first or second arm ~~arms~~;
- wherein the first and second arms are not parallel to each other.

94. The auxiliary shelf mechanism of claim 92, wherein the first arm is being connected to the mounting bracket by a first pivot rod and to the shelf bracket by a second pivot rod and further wherein the second arm is connected to the shelf bracket by a third pivot rod.

96. An improved auxiliary shelf mechanism for positioning an auxiliary shelf; said mechanism including at least two linkage arms connecting a mounting bracket capable of being connected to a desk and an auxiliary shelf bracket having a shelving surface for an auxiliary shelf, wherein the improvement comprises having at least one pivot connection between one of said linkage arms ~~a linkage arm~~ and the shelf bracket above the shelving surface.